

On page 2, line 1, after the words "U.S. Patent Application Ser. No.", please delete

" _____," and insert ~~5-09~~370,757, --.

On page 2, line 3, please delete " _____." and insert -- August 9, 1999. --

In the Brief Description of the Drawings:

On page 5, delete lines 9 and 10, and insert --

FIG. 4A shows an enlarged view of an opening in the circuit board of FIG. 1;

FIG. 4B shows a cross sectional view of the opening in the circuit board of FIG. 1; -- thereof.

In the Specification:

On page 6, line 9, please delete "37" and insert -- 39 -- thereof.

On page 7, line 28, please delete "4b" and insert --14b -- thereof.

REMARKS

As a preliminary matter, Applicants appreciate the Examiner's indication that claims 1-20 and 30-48 are allowed.

With regard to the drawings, Applicants have included herewith marked-up copies of the drawings, with proposed changes in red. As can be seen from the proposed changes, Applicants have attempted to respond to each of the points noted by the Examiner in the present Office Action. Approval of the proposed drawing changes is respectfully requested.

Claim 21 stands rejected under 35 U.S.C. § 103 as being unpatentable over Olsson et al. in view of Applicants' disclosed documents. Applicants respectfully traverse this rejection because none of the references, either alone or in combination, teach or suggest an electrical meter having solder extending to both sides of a circuit board.

As the Examiner correctly identifies, Olsson et al. describes a printed circuit board 4 with a plurality of openings, wherein each opening receives a pin 21. Additionally, a gap is shown between the pin 21 and the printed circuit board 4 when the pin 21 is inserted into the opening. Importantly, the pin 21 of Olsson et al. is formed with a shoulder 27 to prevent a flux 28 from creeping up a surface of the pin 21 during soldering. Previously, the flux 28 could travel to the upper part of the pin 21 where electrical conductors 2 connect to the pin 21, to create an unwanted resistance between the electrical conductor 2 and the pin 21.

Contrary to the Examiner's remarks, however, Olsson et al. does not disclose or suggest "solder passing through said gap and extending to both sides of said circuit board," as claimed by the Applicant. Indeed, as shown in Fig. 1 (prior art) and in Fig. 2 of Olsson et al., the soldering metal 10, 25 only advances, at the most, about one-third the way up layers 5 of the printed circuit board 4, and not to both sides of the printed circuit board 4. While the flux 28 may travel farther up the pin 21 during soldering, the soldering metal 10, 25 does not.

According to the claimed invention, as best illustrated in Fig. 4d, an electric meter is claimed in which the solder passes through a gap between a bayonet 14 and the circuit board 11, and extends to "both sides of said circuit board." Once cooled, the solder forms a structural bond to mechanically and electrically hold the bayonet 14 in place. In this way, the bayonets are able to support the electric meter that can way weigh upwards of several pounds, and further support the high insertion and withdrawal forces that are common with electrical meters, particularly socket based revenue meters. Accordingly, the rejection of claim 21 based upon Olsson et al. should be withdrawn.

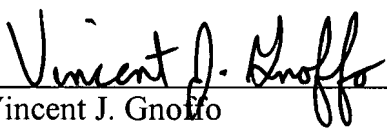
Claims 22-29 are objected to as being dependent upon rejected claim 21. Claims 22-29 contain all the features of independent claim 21, plus additional features. Accordingly,

Applicants respectfully request that the objection to dependent claims 22-29 be withdrawn considering the above remarks directed to claim 21.

For all of the above reasons, Applicants respectfully request reconsideration and allowance of the present application. The Examiner is invited to contact the undersigned attorney at the below-listed number if there are any outstanding issues that could be resolved through a telephone conference.

Dated: May 5, 2000

Respectfully submitted,



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Figure 4A

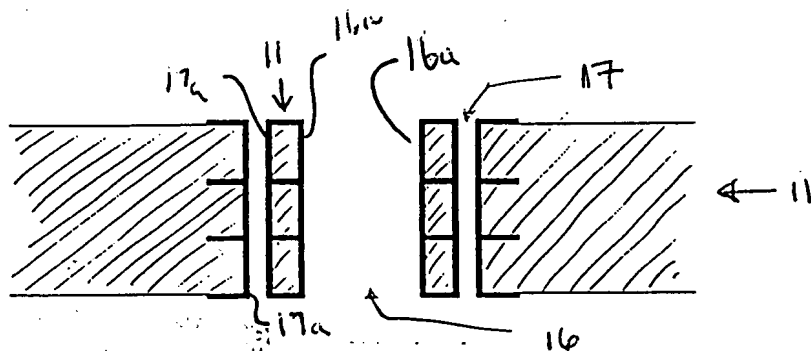
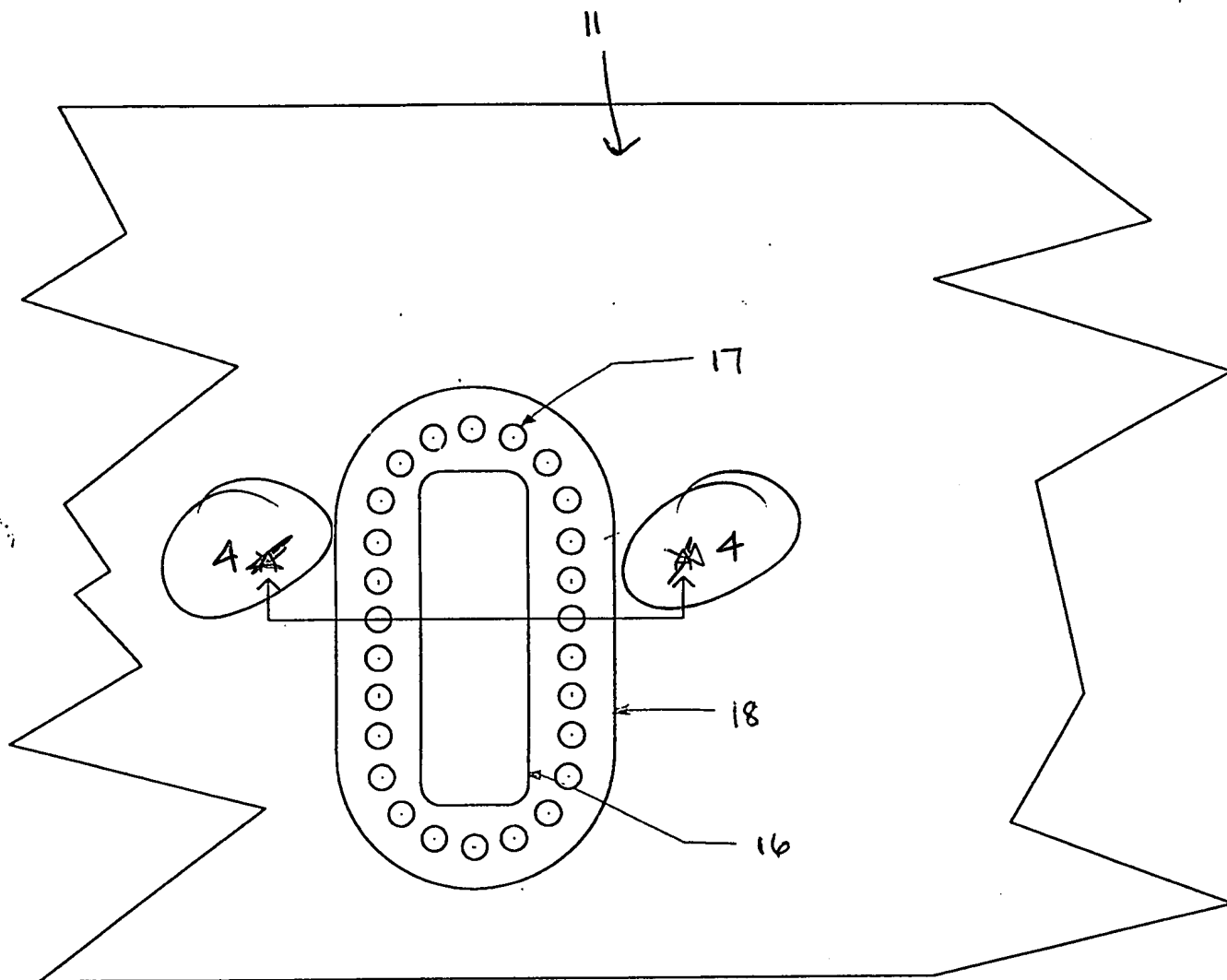


FIGURE 4B

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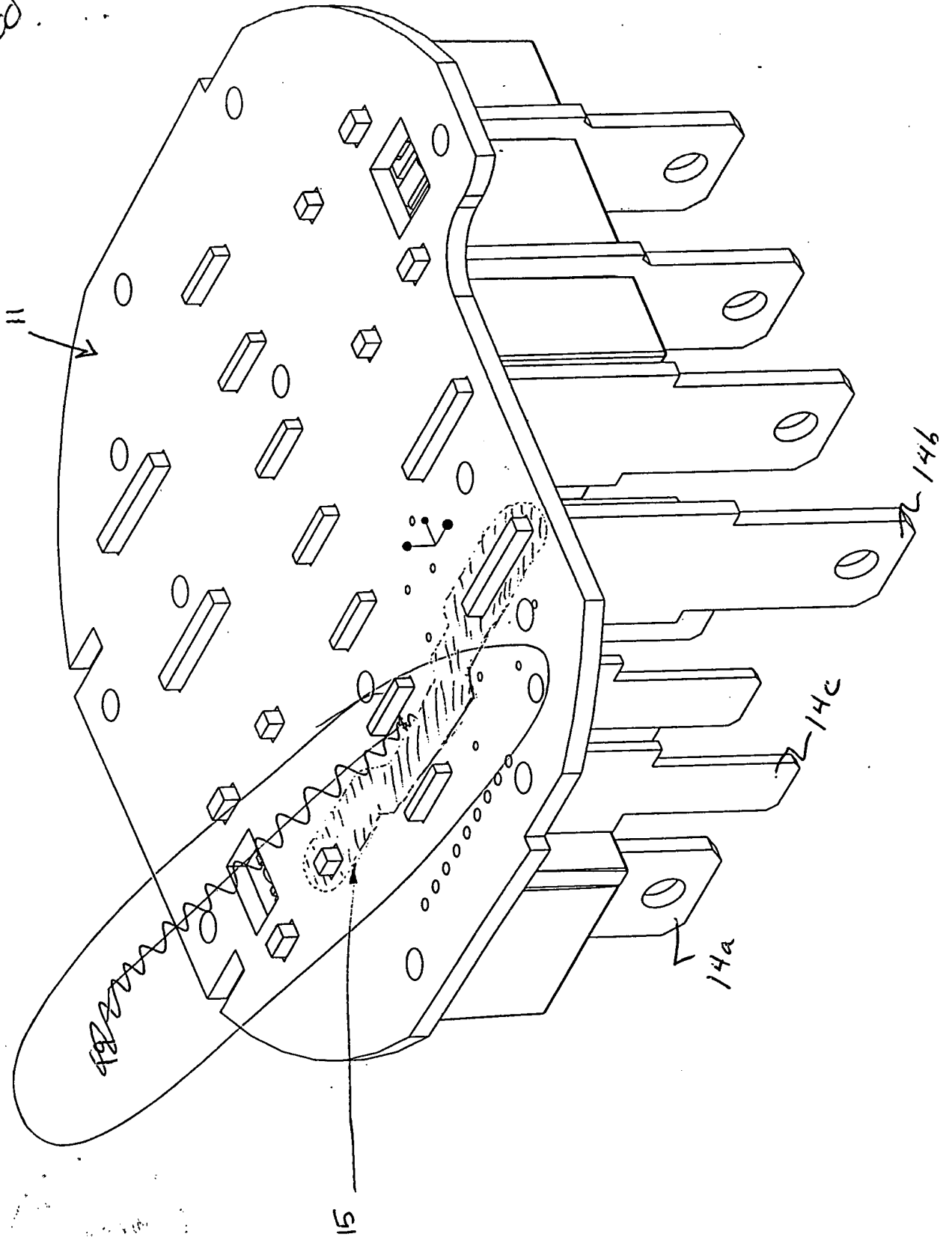


FIGURE 3